REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the following remarks.

Claims 1, 6, and 15-18 were pending. Claims 2-5 and 7-14 have been withdrawn. By this Amendment, Claims 1 and 6 have been amended, Claim 15 has been canceled without prejudice, and Claims 19-20 have been newly added. No new matter has been introduced. Therefore, after entry of the Amendment, Claims 1, 6, 16-20 will be currently pending and under examination.

The Office Action dated August 6, 2008, stated that the arguments submitted in the previous Amendment are not persuasive and thus, again rejected Claims 1, 6, and 15-18 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 7,176,972 to Mutoh et al. ("Mutoh"). In response to the arguments, the Examiner consider the combination of the recording CCD 36 and the photodiode 22 in Mutoh could be considered the photoelectric conversion element as claimed in the present application. In addition, the Examiner alleged that since Mutoh's pixel elements 34 is responsible for discharging charge and since there are a plurality of pixel elements 34 per column and row, there is no reason, based on the claimed language, that each of the pixel elements 34 cannot individually be considered charge-discharging circuit.

Applicants respectfully traverse the above rejections, for the reasons as follows:

Claim 1, as amended, recites an electric charge transfer apparatus, comprising a plurality of columns of vertical charge transfer devices, each of which is formed adjacent to each column of a plurality of photoelectric conversion elements and transfers a signal electric charge converted by the photoelectric conversion element, a plurality of charge-

discharging circuit sets each formed next to each column of the vertical transfer devices at an end of each column of the vertical transfer devices near a horizontal charge transfer device, each charge-discharging circuit set including at least two charge-discharging circuits connected in a serial manner for discharging the signal electric charge transferred by at least one of adjacent vertical transfer devices, the horizontal charge transfer device formed at a lower end of the vertical charge transfer devices and connected at one end thereof with an output circuit; and the output circuit that outputs the signal electric charge transferred by the vertical charge transfer devices to an outside of the electric charge transfer apparatus.

Similarly, Claim 6, as amended, recites that a plurality of charge-discharging circuit sets formed next to each vertical transfer device at an end of each of the vertical transfer devices near a horizontal charge transfer device, each charge-discharging circuit set including at least two charge-discharging circuits connected in a serial manner for discharging the signal electric charge converted by the photoelectric conversion element at a predetermined position and transferred by at least one of adjacent vertical transfer devices.

In Mutoh, a plurality of photodiodes (charge signal converts) 33 is arranged on photo receptive area 32 in a right-angled grid pattern. Pixels 34 each of which includes one photodiode 33 are also arranged in a right-angel grid pattern. One linear CCD for recording (charge signal storage) 36 is provided fro each of the photodiode 33. Further, one linear CCD for vertical read-out (charge signal transfer) 37 is provided for each of columns of photodiodes 33. Figs. 3-7 of Mutoh illustrate enlarged views of each pixel 34 in a photo-receptive area of a high speed image sensor. As shown in the figures and

col. 9, lines 6-15, each pixel 34 includes four elements 36a in the row direction and four elements 36 a in the columnar direction, therefore making up a total 16 elements 36a of the CCD 36 for recording. In col. 9, lines 44-53, each CCD element 37a of the CCD 37 for vertical read-out is formed four sequential N regions 47a and N^- regions 47b.

In Mutoh, however, there is no additional charge-discharging circuit sets each formed next to each column of the vertical transfer devices at an end of each column of the vertical transfer devices near a horizontal charge transfer device, as recited in amended Claim 1 and similarly in amended Claim 6. As shown in Figs. 2 and Figs. 10A to 10C, each column of photodiode 33/pixels 34 (including sixteen CCD 36a) is connected to one CCD 37 for vertical read-out. Even if the Examiner's assumption that the pixel elements 34 are considered the claimed charge-discharging circuit is correct, not admitted by the Applicants, neither the pixel elements 34 nor CCDs 36a are formed next to each column of CCD 37 at an end of each column of the CCD 37 near a horizontal charge transfer device 39. That is, neither pixel elements 34 nor CCDs 36 are formed next to each column of vertical transfer devices at an end of each column of the vertical transfer devices near a horizontal charge transfer device, as recited in amended Claim 1 or formed next to each vertical transfer device at an end of each of the vertical transfer device near an horizontal charge transfer circuit, as recited in amended Claim 6.

Accordingly, amended Claims 1 and 6 are not anticipated by Mutoh and are allowable over the cited art based on the fundamental differences between the claimed invention and Mutoh as described above.

Claims 16-20, which depend from allowable independent Claims 1 or 6, are likewise allowable at least due to their dependencies from patentable amended independent Claims 1 and 6 as well as for the additional subject matter recited therein.

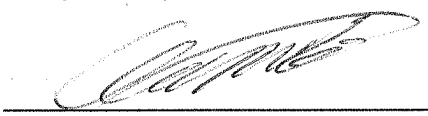
CONCLUSION

In view of the foregoing, reconsideration of the application, withdrawal of the outstanding rejections, allowance of Claims 1, 6, and 16-20, and the prompt issuance of a Notice of Allowance are respectfully requested.

Should the Examiner believe that anything further is necessary in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event that additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. §1.136(a), and any fees required therefore are hereby authorized to be charged to our Deposit Account No. 01-2300 referencing docket number **107317-00063**.

Respectfully submitted,



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